H.E.H. the Nizam's Government.

COTTON MANUAL
1940

by

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Government Central Press,
Hyderabad-Deccan
1942

Price Rs. 3/- Second Issue.

COTTON MANUAL 1940.

CONTENTS

CHAPTER IV.

COTTON CENTRES AND COTTON MARKETING.

CHAPTER V.

COTTON PRICES.

PAGE

CHAPTER VI.

COTTON EXPORTS AND IMPORTS.

CHAPTER VII

COTTON CONSUMPTION AND STOCK

CHAPTER VIII.

COTTON GINNING AND PRESSING.

CHAPTER IX.

TEXTILE STATISTICS.

CHAPTER X.

ENACTMENTS AND REGULATIONS.

CHAPTER XI.

MISCELLANEOUS.

LIST OF MAPS.

LIST OF DIAGRAMS AND CHARTS.

LIST OF ILLUSTRATIONS.

(By the Courtesy of Indian Central Cotton Committee.)

PREFACE.

The Cotton Manual of 1935, the first issue, was well-received and its usefulness as a reference book was appreciated by Government and the Trade. Mr. C. C. Desai, I.C.S., Secretary to Government, Commerce and Industry, Central Provinces and Berar in his letter has thus remarked " It seems to me an extremely useful compilation." As a quinquennial publication it was found necessary to revise its contents for the second issue in the light of the data collected during the quinquennium.

The effects of European hostilities which started in September 1939 and the freezing of Japanese assets are reflected in the trade figures.

Some additional tables of useful statistics are also embodied in the present publication.

Maps and charts illustrating the distribution of the varieties of cotton, location of ginning and pressing factories and other subjects are attached.

Mr. Khwaja Hameed Ahmad, B.A., the Crops Statistician and Mr. Fida Husain, B.A., of my office were of great help to me in the timely preparation of this publication.

MAZHAR HUSAIN, M.A., B.Sc.,
Director of Statistics and Census.

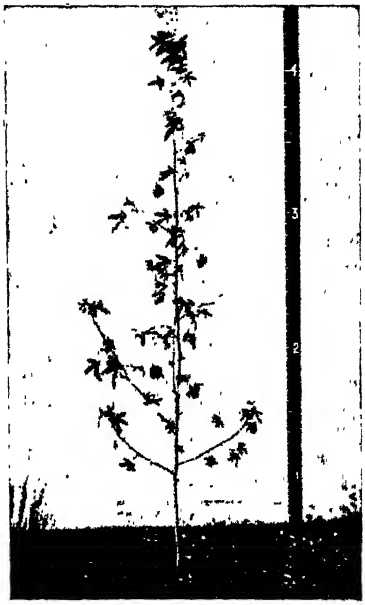
Map of H.E.H. the Nizam's Dominions.

PRINTED 1941 (1350 – 51 F.) COPIES OF THIS MAP CAN BE OBTAINED FROM THE DEPARTMENT OF STATISTICS. PRICE TWO ANNAS

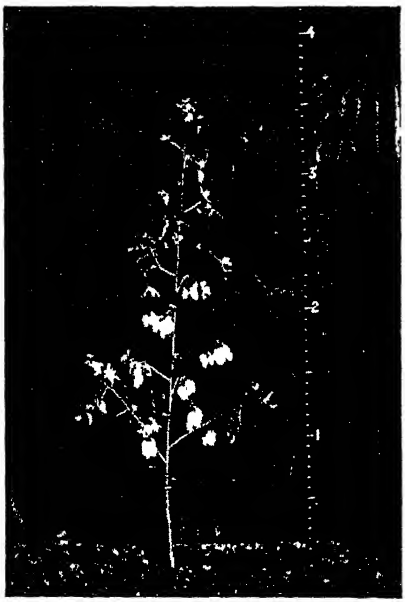
CHAPTER I

Cotton Plant and Cotton Varieties

GOSSYPIUM INDICUM LAMK
PLANT HABIT.



G.N. ROSEA. PLANT HABIT.



G.N. CUTCHICA. PLANT HABIT.

G.N. VERA. PLANT HABIT.

PLATE 2.

G.N. MALVENSIS. PLANT HABIT

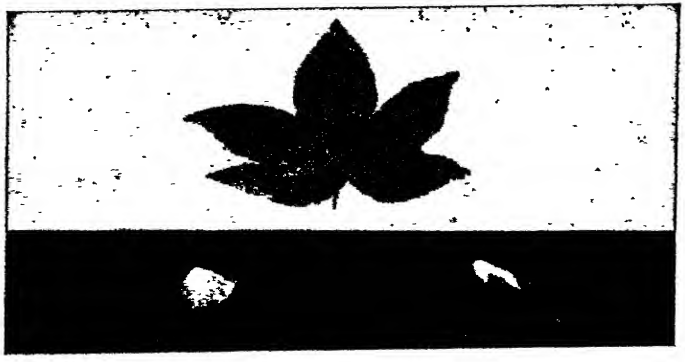
G. HIRSUTUM MILL.
PLANT HABIT.

G. HERBACEUM. PLANT HABIT.

G. OBTUSIFOLIUM COCANADA.
PLANT HABIT.

G. Indicum—Leaf & Flower.

Gossypium Neglectum Rosea—
Leaf & Flower.

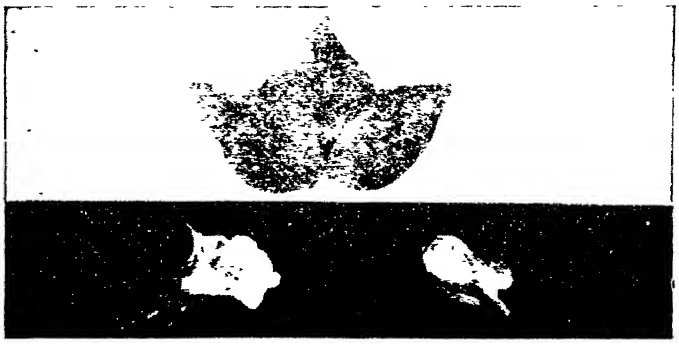


G.N. Cutchica—Leaf & Flower.

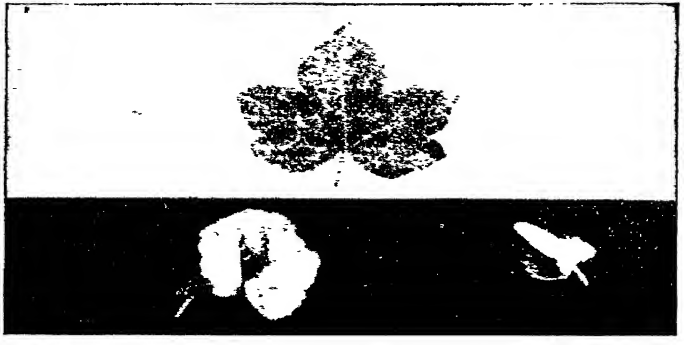
G.N. Vera—Leaf & Flower.

Plate 3.

G.N. MALVENSIS—LEAF & FLOWER.



G. HIRSUTUM—LEAF & FLOWER.

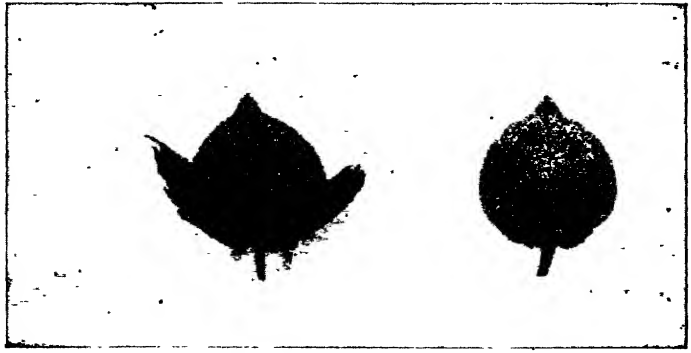


G. HERBACEUM—LEAF & FLOWER.

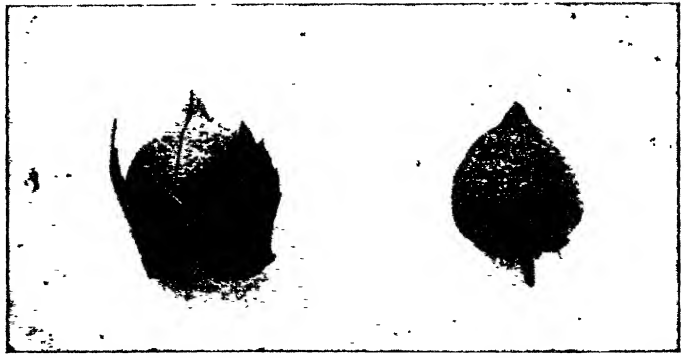
G. OBTUSIFOLIUM COCANADA—
LEAF & FLOWER.

GOSSYPIUM INDICUM—GREEN BOLLS.

G.N. ROSEA—GREEN BOLLS.



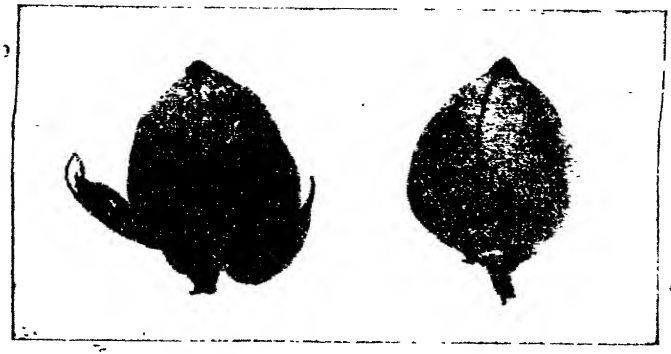
G.N. CUTCHICA—GREEN BOLLS.



G.N. VERA—GREEN BOLLS.

PLATE 5.

G.N. MALVENSIS—GREEN BOLLS.



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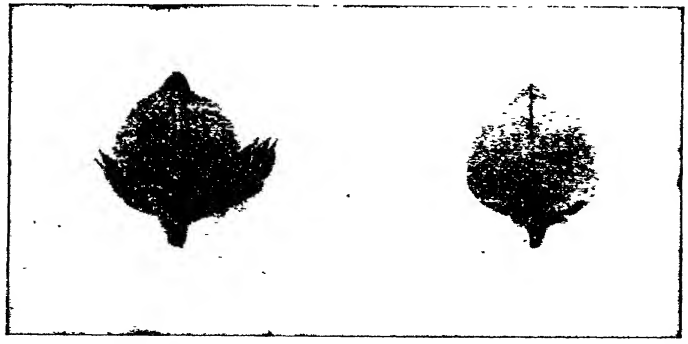
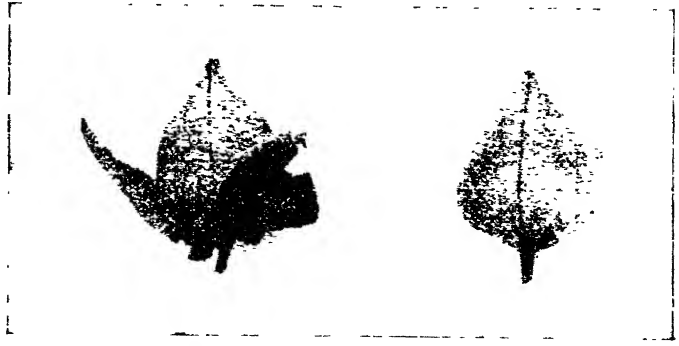
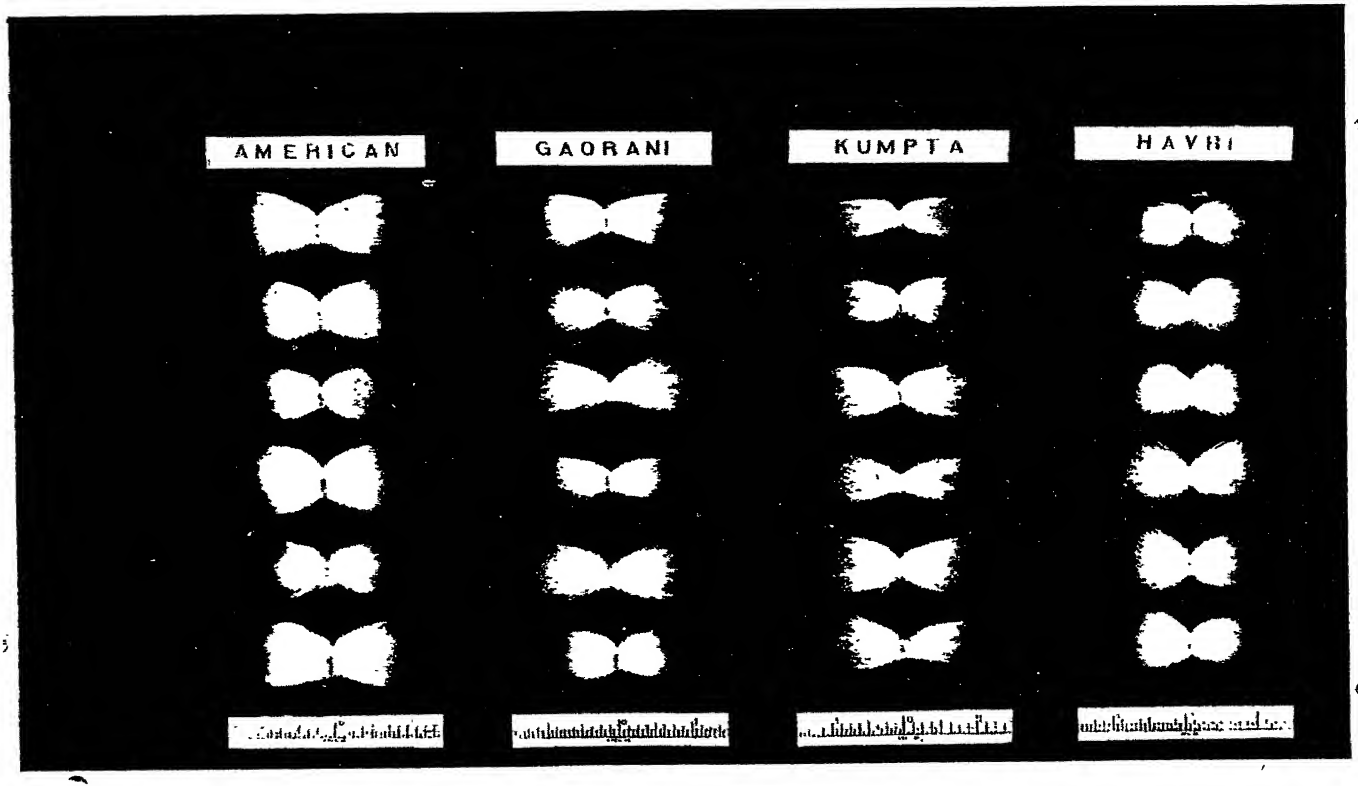


G. HERBACEUM—GREEN BOLLS.



G. OBTUSIFOLIUM COCANADA—
GREEN BOLLS.



VARIATION IN FIBRE-LENGTH OF AMERICAN, HYDERABAD GAORANI, KUMPTA AND HYDERABAD OOMRAS (HAVRI).

PLATE 7.

INTRODUCTORY NOTE ON COTTON PLANT.

CHAPTER I.

(1) Cotton Plant and Cotton Varieties.

Cotton (*Gossypium*).

Hindustani—Kapas (Seed cotton or cotton with seed).
Rooee (Cotton Lint) Binola (Cotton seed).

Marathi— Kapoos or Kapashee (seed cotton).

Telugu— Patti (seed cotton).

Kanarese— Hatti (seed cotton)

In 1939-40 $\frac{\text{area}=3,730,910 \text{ acres}}{\text{outturn}=582,433 \text{ bales}}$ or 63 lbs. of lint per acre when the crop was 75 per cent. of the normal.

Hyderabad has 13.9 per cent. of total cotton area of India and 10.2 per cent. of the total Indian output. Amongst cotton growing provinces it ranks 4th in India with regards to both acreage and outturn. Cotton is almost entirely a dry crop up to the present time.

Cotton occupies the second place among the chief cultivated crops of the State having over 37 lakhs of acres or about 13 per cent. of the net cropped area of the State to its credit. The chief cotton growing tract in Hyderabad State is Marathwara. Its share of cotton in the Dominions is 81 per cent. both of area and outturn. It has rainfall varying from 22 inches in western districts to 35 inches in the eastern districts and above 40 inches in the hilly tracts covered with forest. In the Karnatic tract the rainfall ranges from 18 inches in the west to 26 inches in the east and a good part of it is received during the North-East Monsoon.

Cotton is grown in many parts of the world between 40°N. and 30°S. latitude. Although it is a perennial plant it is forced by cultivation to become an annual. It requires at least six months free from frost. The more

any kind and there is always a ready sale for it in the market. Hence cotton is considered by a farmer as the chief crop for paying the land assessment and providing money for the means of livelihood while the jawar crop is for food.

Rotation.—Cotton is rotated with jawar in heavy soils and with bajra in light soils. But the rotation is modified according to the district season and the condition of the field. Wheat is grown extensively and tur and linseed sometimes as rotation crops. In the districts of Aurangabad and Parbhani cotton is rotated with white jawar and wheat. In Nander and Osmanabad it is rotated with yellow jawar and bajra. In Osmanabad cotton after groundnut. Gulbarga cotton after white jawar and other rabi crops. In Raichur after white or red jawar, groundnut and bajra. In Telingana cotton is taken after jawar, pulses and other Kharif crops.

In Marathwara ploughing is done once in five or six years, in Karnatic and Telingana oftener. Repeated harrowing with bladed harrow is common.

Manuring is given to cotton but not to the rotational crop. Cotton is sown in lines with wooden drill called *tiphan* or *mogha*. The drill may be single, two or three coultered distances between rows vary from 12 to 22 inches. Paired rows of Tur are planted after every 10 to 15 rows of cotton generally. Interculturing is done two to three times by means of bullock-hoe (Kolpa).

Cotton is generally sown immediately after the first fall of rain in the Marathwara. The seed is sometimes sown before the break of the monsoon in anticipation of rain. In Karnatic which receives the North-East Monsoon the seed is sown in September, if sown earlier the lint would be ruined by the late rains. Cotton seedlings are easily injured by heavy rains and the fields have then to be resown. Different varieties take different periods for maturing. The yield is higher for Kharif than for rabi cotton.

Sowing of kharif cotton in Marathwara and Karnatic is done from June to mid-July. This crop in Karnatic is called Mungari crop. The Rabi sowing of cotton is done in September or early part of October and the crop is called Hingari.

In Nalgonda and Nizamabad districts more of the cotton area is under the Rabi Cotton.

Picking season for Kharif is from end of October to the beginning of February in Marathwara. In Telingana and Karnatic it is from November to January (Kharif) and February to April (Rabi). There are usually four pickings. Most of the produce is marketed as Kapas or unginned except in Gaorani area where it is ginned by hand gins.

In Hyderabad, cotton is the most important of the fibre crops grown. There are four distinct cotton growing tracts in the State each characterised by the growth of one or more varieties of the *Genus Gossypium*.

(1) The Marathwara tract which is the largest area of the Kharif cotton. Cotton is sown in June.

(2) The Karnatic tract of which Raichur district is the chief cotton growing tract of Kharif and Rabi types.

(3) The Medak Subah which has the distinct Rabi cotton of its own.

(4) The Warangal Subah having its own type of Cocanada cotton.

The botanical types of cotton of Hyderabad State with localities are :—

(1) *Gossypium Indicum hawk*, *i.e.*, Hyderabad Gaorani or Bani, a Kharif variety found up to 80 per cent. in the Gaorani protected area, *i.e.*, districts Nander, Bidar, talukas Nirmal and Mominabad and part of district Osmanabad.

(2) *G. Neglectum rosea*, *i.e.*, Havri or Jari or Varadi. A Kharif variety found in Osmanabad, Adilabad, Bir, Parbhani, Aurangabad, Karimnagar, Medak, Nizamabad (Kharif) Atraf-i-Balda, Warangal (North), Adilabad (East).

(3) *G.N. Cutchica*, *i.e.*, Mungari or Mathio, a Kharif variety found in Gulbarga, Raichur, Makhtal taluka.

(4) *G.N. Nalvensis*, a Kharif variety found in North-East Raichur, Southern Gulbarga and Makhtal taluka.

(5) G.N. Vera or Kharif variety.

(6) *G. Hirsutum* or American or Buri found up to 25 per cent. as Kharif in the Gaorani protected area and Bir, Aurangabad, Parbhani, Nander, Osmanabad, Bidar and as Rabi in Raichur where it is called Dharwar American or Vilaiti Hatti. It is grown on lighter black soils.

(7) *G. Herbaceum, i.e.*, Hingari or Kumpta and Javari. It is a rabi variety grown on heavier black soils found in Raichur, Nizamabad, Karimnagar, Gulbarga (South), Warangal (North), Nirmal (taluka), Makthal (taluka).

(8) *G. Obtusifolium, i.e.*, Cocanada. It is Rabi variety found in Warangal (South), Nalgonda.

The trade names of cotton of Hyderabad State are as follows :—

(1) *Hyderabad Gaorani.*—It is the produce of Gaorani Protected area, *i.e.*, Nander, Bidar and parts of Adilabad (Nirmal), Bir (Mominabad) and Osmanabad districts. The area under this is nearly 9 lakhs of acres and the annual production is 1.1 lakhs of bales.

It consists of 75 to 80 per cent. of G. Indicum and 20 to 25 per cent. of American. G. Hirsutum or Buri. Staple $\frac{7}{8}$ to $\frac{15}{16}$ inch long, ginning percentage is 25 to 29. Suitable for 24 to 30's warp counts. It is one of the finest Indian cotton, is much liked and largely taken up by all Indian Mills and very little is exported outside India. Reputed markets for this cotton are Bhensa, Umri, Karkheli, Dharmabad, Nander and Latur.

(2) *Hyderabad Oomras.*—It is generally classed as fine Oomras. It has short staple. It is produced in Medak, Karimnagar, Nizamabad, Parbhani, Aurangabad, Mahbubnagar, Adilabad (Part), Osmanabad (Part), Bir (Part), Warangal (North). The acreage is over eighteen lakhs and produce is 3 lakhs of bales or 55 per cent. of the total annual output of the State. The crop of Aurangabad, Parbhani and parts of Adilabad, Bir North, Gulbarga and Osmanabad is locally known as Havri, Tat, Katal or Bharat. When sold in Barsi and Ahmednagar markets it passes under the name of Barsi and Nagar cotton.

It is a mixture of G.N.R. with 10 to 20 per cent. of G. Indicum. Ginning percentage is 33 to 35. Staple $\frac{1}{2}$" to $\frac{3}{4}$" suitable for spinning 8 to 12's warp counts. The chief stations of export of this are Aurangabad, Jalna, Sailu, Parbhani, Partur, Hingoli. The crop of Karimnagar and North Warangal districts contains a mixture of G. Indicum 90 per cent. and G. Herbaceum or Kumpta the rest. The crop of Nizamabad consists practically entirely of Herbaceum type and very little of G.I. The produce of these areas is generally finer than the rest of the Oomras tract but the total annual production is only about 15,000 bales. The crop of Medak, Atraf-i-Balda and Mahbubnagar contains mixture of G.I.C.—G.N.R.—G. Hirsutum—G.N. Malvensis and G.N. Vera.

(3) *Kumpta and Westerns.*—Kumpta is Rabi or Hingoli or Javari produce of Raichur and southern part of Gulbarga district. Area is 5 lakhs of acres and produce is half a lakh of bales. It is mostly G. Herbaceum. Staple is $\frac{3}{4}$ to $\frac{7}{8}$ inches, fit for 20 to 24's warp count. Ginning percentage is 25 to 27.

Jayavanti is an improved type for this tract. G. Hirsutum or Buri or American is also Rabi and is included in Kumpta. The Kharif crop of this tract which includes G.N. Cutchica, Mungari or Mathio and G.N. Malvensis are included in Western.

(4) *Cocanada or Warangals.*—It is G. Obtusifolium (Rabi) is of southern part of Warangal and district Nalgonda. Area is one lakh of acres production is 2,500 bales. It is brown in colour with staple of $\frac{5}{8}$ to $\frac{7}{8}$ inches suitable for 16 to 20's warp counts. Ginning percentage is 23 to 26. Chief markets are Warangal, Khammam and Madhira.

The import and export of cotton is as follows and the chart annexed will also show it clearly.

	Quantity in tons.	Value in Rupees.
Import	289	1,64,000
Export	1,070,321	5,79,69,000

I.—(2). WORLD'S COTTON

(In thousands of 500 lbs.

Place	1930-31	1931-32	1932-33	1933-34
1	2	3	4	5
America.				
U.S.A. Lint	13,932	17,096	13,002	13,047
Linters	986	1,067	912	982
Total ..	14,918	18,163	13,914	14,029
Mexico	174	208	99	255
Brazil	471	575	438	1,014
Peru	265	228	237	278
Argentine	136	165	146	191
Others	57	46	39	70
Asia.				
*India @(including Nizam Dominions)	5,226	4,007	4,656	5,108
H.E.H. the Nizam's Domns.@..	381	509	534	564
China	2,386	1,733	2,195	2,052
Japan and Korea	147	99	133	207
East Indies, etc.	18	15	13	16
Russia	1,589	1,846	1,776	1,844
Persia	64	107	79	137
*Iraq, Ceylon, etc.	3	1	×	..
Asia Minor, etc.	120	131	68	197
Africa.				
Egypt	1,655	1,271	991	1,715
*Sudan	96	188	110	126
*East Africa	166	182	269	274
*South Africa	8	3	2	3
*West Africa	15	5	20	23
Non-British	125	96	121	141
West Indies.				
*British	4	2	2	3
Others	21	31	20	24
*Australia	10	4	11	18
Grand Total ..	27,674	29,101	25,845	28,325

* Empire Crops. @400 Lbs. Bales.

(Source—Bombay

CROPS (TODD's).

Bales approx.)

1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
6	7	8	9	10	11
9,637	10,638	12,399	18,946	11,943	11,817
1,001	1,089	1,407	1,819	1,500	1,350
10,638	11,727	13,806	20,765	13,443	13,167
223	251	373	340	225	230
1,359	1,757	1,824	2,075	1,877	2,100
342	380	374	415	393	405
295	354	144	237	300	354
71	86	127	128	130	120
4,857	5,933	6,317	(a) 5,779	(a) 5,120	(a) 4,942
..	569	499	570	506	502
3,033	2,410	3,741	3,083	2,200	1,800
225	245	226	303	267	253
15	14	17	17	17	17
1,772	2,313	3,550	3,782	3,851	4,050
200	125	161	150	150	170
2	4	8	16	16	15
223	382	345	453	555	520
1,511	1,707	1,821	2,202	1,668	1,800
237	199	266	265	265	225
273	335	350	401	320	320
3	2	3	1	2	2
47	48	38	24	25	38
158	223	275	300	300	300
4	4	4	5	4	5
30	25	27	21	20	20
14	13	9	10	10	12
25,532	28,537	33,806	40,772	31,158	30,865

× Less than 500 bales. (a) Excludes Burma.

Cotton Annual).

I.—(3). CLASSIFICATION OF THE WORLD'S COTTONS (TODD.)

Group	Length of staple (Inches)	Variety	Where grown	Average Bale weight lbs.
1	2	3	4	5
I.	Above $1\frac{3}{8}$.	Sea Island ..	British West Indies	400
			U.S.A.	480
		Egyptian :—		
		Sakel, Maarad, Sakha 4, Giza 7, Giza 62.	Egypt ..	740
		Sakel ..	Sudan	400
		Pima ..	Arizona	480
II.	Above $1\frac{1}{8}$	*Egyptian* :—		
		Giza 12 & c. ..	Egypt	740
		Egyptian ..	Russia	..
		Brazilian ..	North Brazil ..	420
		Tanguis ..	Peru	500
		Marie Galante ..	West Indies ..	400
		San Domingo ..	Haiti	500
		Staple American	Mississippi Delta ..	480
		,, ,, ..	S. Carolina, etc. ..	480
		,, ,, ..	Uganda and Tanganyika.	400
III.	$\frac{7}{8}$———$1\frac{1}{8}$	American ..	U.S.A.	480
			Mexico	480
			Central and South America. ..	500/550
			Southern Brazil ..	400
			Argentine ..	500
			Sudan	400
			E. and S. Africa ..	400
			Nigeria, Belgian Congo and French West Africa ..	400
			Australia ..	400
			Iraq	400
			Russia	500
			Europe and Asia Minor.	250/500
			China, Korea, & c. ..	500
		Indian Long Staple.	Punjab, Sind, Broach, Madras & c. ..	400
IV.	Below $\frac{7}{8}$.	American ..	U.S.A.	480
		Indian, & c. ..	India	400
			Korea	500
			China	500
			East Indies ..	500
			Persia ..	500
			Asia Minor ..	500

I.—(4. *a*)—Characteristics of Cotton Varieties grown in India.

Bengals.—A general name given to a number of varieties of cotton grown over the whole of Northern India, from Bengal to Punjab, including Rajputana and consisting entirely of a mixture of varieties of Gossypium neglectum with a small and very variable percentage of Gossypium indicum. The staple of true Bengal is usually from $^4/_8$ to $\frac{5}{8}$ inch, and that of, ordinary Bengals is from $\frac{3}{8}$ to $^4/_8$ inch. The ginning percentage varies between 32 and 38. Coarse but of a good colour when not stained by pink boll-worm damage. Usually the shortest staple cotton in India, tenderable under Hedge Contract No. 1 is Fully Good M.G. Bengal Contract. A number of varieties under this class are suitable for spinning up to 8/10's ordinary reeling or weft yarn.

United Provinces.—A variety of Bengals grown in the United Provinces, a mixture of the following varieties :—

G. indicum-Staple $^6/_8''$, Ginning percentage 32.

G. indicum-Mollisoni (Gammie). Staple $^4/_8''$, Ginning percentage 40.

G.N. Malvense (Gammie)—Staple $\frac{5}{8}''$, Ginning percentage 30.

G.N. Verum.—Staple $^4/_8''$ to $\frac{5}{8}''$, Ginning percentage 36.

G.N. Bengalense (Gammie)—Staple $\frac{5}{8}''$ to $^6/_8''$, Ginning percentage 33.

G.N. Roseum.—Staple $\frac{3}{8}''$, Ginning percentage 38.

G.N. Cutchicum.—Staple $\frac{3}{8}''$, Ginning percentage 36.

Tenderable under Hedge Contract No. 1.—Fully good M.G. Bengal Contract, the Smoothest of the Bengal varieties falls into this group. Its blow-room loss is 9-11 per cent. and is suitable for spinning 8/10's reeling for weft. Production is about 1,61,000 bales (1939-40).

The Government selection Aligarh A. 19 (G.N. Roseum) is grown over an area of approximately 50,000 acres. Its staple is $\frac{5}{8}''$ long and fairly regular. Its blow-room loss is 6-9 per cent., the variation being partly due to the extent of damage by the pink boll-worm. It is suitable for spinning 8/10's. warp.

Rajputana.—A variety of Bengals grown in Rajputana, comprising a mixture of the following varieties :—

G. indicum—Staple $^{6}/_{8}''$, Ginning percentage 32.

G. indicum—Mollisoni (Gammie). Staple $^{4}/_{8}''$, Ginning percentage 40.

G.N. malvense (Gammie).—Staple $\frac{5}{8}''$, Ginning percentage 30.

G.N. verum.—Staple $^{4}/_{8}''$ to $\frac{5}{8}''$, Ginning percentage 36.

G.N. bengalense (Gammie).—Staple $\frac{5}{8}''$ to $^{6}/_{8}''$, Ginning percentage 33.

G. roseum.—Staple $\frac{3}{8}''$, Ginning percentage 38.

G.N. cutchicum.—Staple $\frac{3}{8}''$, Ginning percentage 36.

Tenderable under Fully Good M.G. Bengal Contract (Hedge Contract No. I.).

The cotton grouped under these varieties is generally roughish. Its blow-room loss is 9-11 per cent. and is suitable for spinning 8/10's reeling or weft. Production is about 55,000 bales (1939-40).

Sind (Deshi).—A variety of Bengals grown in Sind : the usual mixture of varieties of G. neglectum. Staple $\frac{3}{8}''$ to $\frac{5}{8}''$. Ginning percentage 35. Tenderable under Hedge Contract No. I., *i.e.*, Fully Good M.G. Bengal Contract. This cotton is the roughest and whitest in colour of all Bengals. Its blow-room loss is 8-10 per cent. and is suitable for spinning 8-10's reeling or weft. Production is about 83,000 bales (1939-40).

The Government selection Sind N.R. is superior to the other varieties in yield and ginning percentage.

A characteristic feature of the Sind (Deshi) cotton is its harsh feel which is due to its relatively low wax content and which makes it especially suitable for mixing with wool in the manufacture of rugs, blankets, etc.

Punjab (Desi).—Grown in the Punjab to the north-west of a line drawn from Ambala to Hissar and consisting mainly of the various varieties of G. neglectum with variable proportions of G. indicum/mollisoni (Gammie) and G. sanguineum. Tenderable under Hedge Contract

No. I., *i.e.*, Fully Good M.G. Bengal Contract. Its blow-room loss is 9-11 per cent. and is suitable for spinning 8-10's reeling or weft. The production of this cotton is about 6,39,000 bales (1939-40).

The Government selection Mollisoni, has a ginning percentage of 36 and a staple length of about $\frac{5}{8}''$. It gives a blow-room loss of 7-9 per cent. and is suitable for spinning up to 8-10's reeling. It is marketed as part of the ordinary Punjab (Deshi) crop.

Broach.—A general name for cotton grown over lower Gujarat as far north as Baroda ; consists of a mixture of varieties of Gossypium herbaceum. The part of Gujarat south of the river Narbada now grows mainly the superior Surat type and the Broach tract proper now lies north of the river. The value of some Broach cotton is marred by the presence of a high percentage of Goghari (q.v.) and in the north-east of the tract by certain amount of admixture with Central India cotton of the neglectum type. As at present grown it contains a variable amount of Goghari. The shortest variety of Broach grown in variable amounts in different parts of the Broach tract is commonly called " Goghri." Its ginning percentage is high and its staple weak and short being $\frac{4}{8}''$ to $\frac{5}{8}''$ in length.

The characteristic of " Broach " cotton is its bright colour and its softness. Its staple is $\frac{5}{8}''$ to $\frac{6}{8}''$ and its ginning percentage about 35. It gives a blow-room loss of 7-9 per cent. and is suitable for spinning 14's warp and 18's weft. Production is about 257,000 bales (1939-40). It is tenderable under Hedge Contract No. II, *i.e.*, Fully Good M.G., Broach Contract. Broach cotton known as farm cotton and grown from selected seeds produces about 75,000 bales, gives a blow-room loss of 7-9 per cent. and is suitable for spinning 20's warp and 24's weft.

Saw-ginned Dharwar or Dharwar American.—A mixture of Upland American (G. Hirsutum) and New Orleans (G. Mexicanum) types of American cotton, the former predominating : acclimatised in southern part of Dharwar district and northern districts of Mysore. Slightly inferior to, but distinctly less leafy than Kumptas. So called because at one time it was largely saw-ginned, is now mainly roller-ginned. Staple $\frac{6}{8}''$ to $\frac{7}{8}''$. Ginning percentage 30. Only the saw-ginned cotton is tenderable under Hedge Contract No. II Fully Good M.G. Broach

Contract. This cotton has been replaced to a great extent by Gadag No. I (q.v.). Its blow-room loss is 9-10 per cent. and it is suitable for spinning up to 18's warp and 20's weft. The production of roller-ginned cotton is about 25,000 bales.

Punjab American (including Sind American) 4 F (G. Hirsutam-Mill).—An acclimatised Upland American cotton grown mostly in the Canal Colonies of the Punjab and in Sind, resembles ordinary Upland American in colour and style. Principal constituent Punjab-American 4 F. Ginning percentage 32. Tenderable under Hedge Contract No. II. Fully Good M.G. Broach Contract.

The area under cultivation of Punjab-American 4 F. is about 1,730,000 acres. Its staple is $\frac{3}{4}$" to $\frac{7}{8}$" long, fairly strong and regular. It gives a blow-room loss of 8-10 per cent. and is capable of spinning 20's warp. The production of pure Punjab/American is about 655,000 bales and pure Sind/American about 251,000 bales.

Sind/American (N.T.).—A new type of cotton grown in Sind. Its staple length is from $\frac{7}{8}$" to 1" and is capable of spinning 24's warp and 32's weft. It gives a blow-room loss of about 8 per cent. The production is about 50,000 bales which is likely to increase in future. Tenderable under Hedge Contract No. II. Fully Good M.G. Broach Contract.

Punjab-American 289 F.—Another improved type of Punjab American grown in the lower Bari Doab Canal Colony. The Area under its cultivation is about 30,000 acres. Its staple length is from 1-1 $^{1}/_{32}$", the fibre is fine but inclined to be somewhat immature, which presumably gives rise to some neppiness in its yarn. It gives a blow-room loss of about 9 per cent. and is suitable for spinning up to 30's warp or 40's weft. Its production is about 66,000 bales. Tenderable under Hedge Contract No. II. Fully Good M.G. Broach Contract.

Surat (G. herbaceum-Linn).—Cotton grown in Surat and southern part of Broach District. Staple $\frac{7}{8}$" to $^{31}/_{32}$" Ginning percentage 32. Tenderable under Hedge Contract No. 11. Fully Good M.G. Broach Contract. Suitable for spinning up to 20's/24's warp. It gives a blow-room loss of about 6-7 per cent. Production about 80,000 bales. This cotton is remarkable for its bright white colour and silky feel.

Surat 1,027.—An improved strain of Surat. Throughout the major portion of the tract south of the Tapti and also in part of the area between the Tapti and Narbada especially Rajpipla and Ankleshwar the pure strain Surat 1027 A.L.F. is now grown. It is remarkable for its bright white colour and silky feel.

The area under this cultivation is about 300,000 acres. It gives a blow-room loss of 7-8 per cent., possesses a staple length of about 1″ and is suitable for spinning up to 30's warp. The production is about 50,000 bales. It is tenderable under Hedge Contract No. II. Fully Good M.G. Broach Contract.

Navasari (*G. Herbaceum-Linn*).—The best type of Surtee grown in the extreme south of the Surath district and of the Baroda State, the principal centres are Navasari and Billimora. Staple about 1″. Ginning percentage 31. Tenderable under Hedge Contract No. II. Fully Good M.G. Broach Contract. Suitable for spinning up to 30's warp. Its blow-room is 6-7 per cent. Production is about 25,000 bales. It is remarkable for its bright white colour and silky feel.

Dholleras.—A general name for a mixture of at least two varieties grown in northern Gujart, Kathiawar, etc. They include the leafy types known as Wagad or Kala and the cleaner type known as Lalia. Tenderable under Hedge Contract. No. II. Fully Good M.G. Broach Contract. Their ginning percentage, ranges between 30 and 35 per cent. The staple length of Wagad or Kala is $\frac{3}{4}$″ to $\frac{7}{8}$″ and Lalia $\frac{5}{8}$″ to $\frac{3}{4}$″. Wagad is capable of spinning 16-18's warp, and Lalia 14's warp. Wagad gives a blow-room loss of 14 per cent. Kala 16 per cent. and Lalia 12 per cent. The total production is about 200,000 bales.

The best constituent of the Commercial Dholleras is Wagad. A characteristic features of this variety is that the bolls do not open when ripe. These are consequently picked in one lot and the seed-cotton is extracted later by crushing the bolls.

Oomras.—A general name given to cotton produced over very large areas of the Central Provinces, Central India, Berar, Khandesh, Kathiawar (where it is known as "Mathia"), Nasik Sholapur and the Nizam's Dominions, and includes many varieties. Name derived from Amraoti (Oomrawatee), the headquarters of the Berar Division. The finer types predominate in the Central Provinces and these fetch a premium over the Berar Oomras

which in their turn are superior to the Khandesh Oomras and Mathias. The improved variety Verum 262 and its further selections, to which a reference will be made below, have been evolved for the Central Provinces and Berar.

Berar.—Mixture of varieties of Gossypium neglectum with a staple of $\frac{1}{2}''$ to $\frac{6}{8}''$ with a dwindling amount of G. Indicum, grown in Berar. Ginning percentage 35, coarser varieties 38-40. Tenderable under Hedge Contract No. III. Fine M.G. Oomras and No. IV, Fully Good M.G. Oomras. Suitable for spinning up to 12's/14's reeling and gives a blow-room loss of about 10 per cent. The production is about 368,000 bales (1939-40).

The improved variety verum 262, grown over an area of about 90,000 acres (C.P. and Berar) has a soft feel and ginning percentage of 32-35, and a staple length of $\frac{7}{8}''$. It is suitable for spinning up to 20's/24's warp and gives a blow-room loss of about 9 per cent. The production is about 25,000 bales and the area under its cultivation is on the increase.

Central Provinces.—A variety of Oomras composed of different varieties of G. neglectum with a certain amount of G. indicum (Bani), grown in the following civil districts of the Central Provinces.

Chanda, Wardha, Nagpur, Chinwara, Seoni and Bhandara, in a small adjoining portion of Berar, Yeotmal and the neighbouring parts of the Hyderabad State. Average staple $\frac{5}{8}''$ to $\frac{6}{8}''$. Ginning percentage 35 and gives a blow-room loss of 7 to 8 per cent. Tenderable under Hedge Contract Nos. III and IV. Fine M.G., Oomras and Fully Good Oomras. C.P. No. I is suitable for spinning up to 12/16's reeling. C.P. No. II up to 12/14's reeling. The production of C.P. No. I which is remarkable for its cleanliness, *i.e.*, freedom from leaf, dirt or stain is 200,000 bales while that of C.P. No. II is about 150,000 bales.

From the improved variety Verum 262 (see above), two further selections have been made (1) late Verum—it is especially suited to areas in which monsoon may continue till late in the season. (2) V. 434, it is found to be less susceptible to seasonal variations than Verum 262, and is therefore suited to areas in which the climatic conditions vary considerably from season to season.

Gaorani or Bani Cotton in greater or less mixture over a million acres in the north of the Nizam's Dominions and the Hinghanghat district of the Central Provinces. It consists essentially of Gossypium indicum, gives a small ginning percentage of 25 and does not yield a large crop per acre. The staple is over one inch and it is the finest indigenous Indian cotton. Though included under Oomras for statistical purposes this cotton is not included in Oomras for purposes of Hedge and delivery contract, being a long staple cotton as distinct from a fair-staple cotton.

Central India.—Mixture of varieties of Gossypium and neglectum belonging to the Oomras class. Grown in Central India States, Nimar and also British Indian territories. Staple $\frac{5}{8}$″ to $\frac{6}{8}$″. Ginning percentage 33. Tenderable under Hedge Contract No. IV. Fully Good M.G. Oomras Contract, suitable for spinning up to 14/16's weft yarn and gives a blow-room loss of 11 to 12 per cent. Production about 250,000 bales.

Malvi.—A variety of cotton also grown in Central India States, has a silky feel and a staple length of $\frac{3}{4}$″ to $\frac{7}{8}$″, capable of spinning upto 20's warp and gives a blow-room loss of about 10 per cent. Its production is about 40,000 bales.

Khandesh.—A variety of Oomra being a mixture of varieties of Gossypium neglectum and Roseum, grown in East and West of Khandesh and Nasik, the same type is found in adjoining parts of Hyderabad, in Ahmadnagar, Sholapur and north Bijapur. Average staple $\frac{4}{8}$″ to $\frac{5}{8}$″. Ginning percentage 33 to 38. Tenderable under Hedge Contract No. IV. Fully Good M.G. Oomras. It gives a blow-room loss of 9-11 per cent. and is suitable for spinning up to 10's/12's reeling. The production is about 280,000 bales which includes about 30,000 bales of Banillas.

A remarkable improvement has been noted in the staple length of Khandesh cotton, and it is beginning to be appreciated for this by foreign countries. This improvement is reflected in the relatively firm basis for this cotton compared with the Oomras contract.

A considerable fraction of the area in Khandesh has passed under Banilla cotton, which is a cross between Bani and Commilla. The former which is also known as Hinghanghat Bani possesses a fairly long and silky staple but a low ginning percentage, while the latter is a

rough short stapled variety possessing a high yield and a good ginning percentage. The hybrid, Banilla has inherited the characters of both the parents, it is superior to the low grade Oomras, being suitable for 12/16's warp.

Khandesh-Jarila.—Jarila cotton which has been introduced for general cultivation in Khandesh is superior to local or Banilla in staple, and is highly wilt resistant. Its colour is white and feel is soft, staple is $^{6}/_{8}$" to $\frac{7}{8}$" and spinning capacity is 24's warp. Its yield and ginning outturn are equal to those of local type. It is suited to the conditions of Khandesh and is much appreciated both by the cultivator and the trade. A scheme, financed jointly by the Indian Central Cotton Committee and the Government of Bombay, for multiplication and distribution of the seed of this variety, has been launched for a period of five years.

The total area under Jarila is estimated 199,570 acres and the production is estimated 57,000 bales or an average of 114 lbs. of lint per acre.

Mathia.—A fair staple variety of the Oomra group containing a mixture mostly of Gossypium neglectum, largely ground in parts of Khathiawar and to a small extent in the Ahmedabad district. Staple $\frac{5}{8}$". Ginning percentage 32. Suitable for spinning up to 10's/12's reeling. A very leafy cotton and gives a blow-room loss of about 15 per cent. Production about 250,000 bales. Tenderable under Hedge Contract No. IV. Fully Good M.G. Oomras.

Westerns.—G. herbaceum with variable and relatively small amount of G. indicum, the general name for the cotton grown in Anantapur and Bellary districts of Madras, part of Bijapur district of Bombay, Southern Maratha States and South-West Hyderabad. Staple $^{6}/_{8}$". Ginning percentage 25. Tenderable under Hedge Contract No. V. Good M.G. Southerns. Suitable for spinning up to 16's/20's warp. Usually a leafy cotton due to defective picking, of a brownish tinge and gives blow-room loss of 11-13 per cent. The total production of "Westerns" (including "Mungari," "Jowari" and "Farm" cottons) is 200,000 bales.

The staple of Westerns grown on the red soils of the Anantapur and Bellary districts of the Madras Presidency and picked as early as October is however only $\frac{5}{8}$". This is known as "Mungari". This cotton is preferred in this tract because it is early and yields well even on poor soils

The late-sown crop is called " Jowari " and is the proper Westerns. The production of " Mungari " is 40,000 bales and that of " Jowari " 120,000 bales.

The improved type for this tract is called Hagari 1, which is commercially known as " Western Farm." It is a pure strain, grown mostly in stiff black soil, but occasionally in mixed soil. It gives a ginning percentage of 29. It is slightly creamy in colour, has a soft and bodied feel, possesses a staple length of $\frac{7}{8}$" to $\frac{15}{16}$", is suitable for spinning up to 24's warp and gives a blow-room loss of 9 per cent. Production is about 40,000 bales.

Small quantities of white Upland cotton are also grown in the Western tract.

Northerns.—A mixture of G. herbaceum and G. indicum, grown in Kurnool and part of Cuddapah districts (chief centre Nandyal) has two sub-varieties, red and white. Staple $\frac{7}{8}$". Ginning percentage 27. The white variety is tenderable under Hedge Contract No. V. Good M.G. Southerns. It gives a blow-room loss of about 8 per cent. and is suitable for spinning up to 22's warp. The production of Northerns, inclusive of Nandyal 14, is 60,000 bales.

The improved variety for this tract is called Nandyal 14. It is bright white to creamy white in colour, has a soft and full bodied feel. Its staple is fairly strong and has a length of $\frac{7}{8}$" to $\frac{15}{16}$". It is suitable for spinning 24's/26's warp.

Cocanadas.—(*G. obtusifolium Cocanada* (*Gammie*) *and G. indicumverrapatti*).—A variety of cotton grown in the East and West Godavari, Krishna, Guntur and Nellore districts. Remarkable for its deep red colour and strong fibre. Staple $\frac{5}{8}$" to $\frac{13}{16}$". Suitable for spinning 14's/16's warp. Ginning percentage is 23. Production about 40,000 bales.

Kumptas.—A variety of Gossypium herbaceum grown in large areas in the southern part of the Bombay Presidency and the northern districts of Mysore, also grown in the adjoining part of the Hyderabad State. Staple $\frac{7}{8}$". Ginning percentage 26 to 27. A strong and wiry staple, has a brown tint and gives a blow-room loss of 14-16 per cent. Tenderable under Hedge Contract No. V. Good M.G. Southerns. Suitable for spinning up to 22's warp. Production including " Jayawant " is about 160,000 bales.

The improved variety grown over an area of over 100,000 acres in the districts of Dharwar, Belgaum and Bijapur is known as Jayawant. It is a pure strain obtained from a cross between two selections of Kumpta and possesses the good characters of both the parents, namely a good staple and a fair amount of resistance to wilt, which is a source of great loss to the cultivators in these areas. It has a staple length of about an inch, gives a blow-room loss of 12 per cent. and is suitable for spinning 26/30's warp.

Gadag No. 1.—A pure Upland type established on a considerable scale in the Dharwar district. Ginning percentage 34-35. It is grown over an area of about 70,000 acres. Its staple is variable, ranging from $^{13}/_{16}$" to $^{15}/_{16}$". It gives a blow-room loss of 7-8 per cent. and is suitable for spinning 20/24's warp. Small quantities of Upland are also grown in Chitadrug, Savanur, Gokak and Athni.

Cambodia.—A type of American Upland (Gossypium hirsutum) obtained direct from Cambodia in 1905. The best Cambodia is grown in Coimbatore district (Tirupur) and west Madura (Bodinaykkanur). When well grown and properly handled, one of the best of Indian cottons. The best irrigated Cambodia is 1" staple, the unirrigated crop is extremely variable in staple frequently only $\frac{7}{8}$". The annual production of irrigated Cambodia is about 120,000 bales, and that of unirrigated Cambodia about 50,000 bales, *i.e.*, a total of about 170,000 bales. Ginning percentage 33. Tenderable under Hedge Contract No. V. Good M.G. Southerns. It gives a blow-room loss of about 6 per cent. and is suitable for spinning up to 24/30's warp.

The Government selection for this tract is known as Cambodia Co. 2. It is usually picked in a clean condition, has a good soft feel and is suitable for spinning 30's warp.

Tinnevellys.—A mixture of varying proportions of Karunganni (a variety of Gossypium indicum) and Uppam (Gossypium herbaceum). Strong, of a white to slightly creamy colour. Grown in Madura, Ramnad and Tinnevelly. Staple $^{6}/_{8}$" to $\frac{7}{8}$". Ginning percentage 27. Is being replaced by pure Karunganni . Tenderable under Hedge Contract No. V. Good M.G. Southerns. It gives a blow-room loss of 6-8 per cent. and is suitable for spinning up to 16's warp and 20's weft. Production about 90,000 bales.

Karunganni.—The best indigenous cotton of Madras and the best type of Tinnevellys. Karunganni cotton is now mainly sold as such. Grown in villages near Tuticorin, Tinnevelly, Madura, Ramnad, Salem, Coimbatore and Trichinopoly. A variety of Gossypium indicum. White to creamy in colour but creamier than Tinnevellys. Ginning percentage of about 30. Staple $\frac{7}{8}$". It gives a blow-room loss of 6 to 8 per cent. and is capable of spinning up to 24's warp. Tenderable under Hedge Contract No. V. Good M.G. Southerns. Production is about 60,000 bales.

Comillas (Tipperas).— This cotton which takes its name from the town Comilla in the Tippera district of Assam is the variety known as Gossypium cernuum of which there is a sub-variety, G. cernuum sythetense, which has a khaki coloured lint. Comilla cotton is grown over eastern Bengal and Assam, and is distinguished for the size of its bolls, which in parts of the Garo Hills, attain a length of 8 inches. Comilla cotton is a very short stapled cotton being only $\frac{3}{8}$" to $^4/_8$" with a high ginning percentage varying from 43 to 50. As the lint is very harsh in feel, it is commonly used as an adulterant with wool.

Burma Cottons.—These cottons are largely exported direct from Rangoon or overland to China and are little known in India. The principal centres are Myingyan and Thayetmyo. The late type Wagyi (G. obtusifolium) is grown around Thayetmyo and resembles Broach. The staple varies greatly, some samples being fully $^6/_8$ inch, whilst others are much shorter. These cottons gin up to 40 per cent. The early type of Wagal is a mixture of different forms of G. neglectum. The average staple is considerably superior to Bengals but varies from $\frac{1}{2}$ inch to $\frac{3}{4}$ inch. A pure type distributed by the Agricultural Department is $\frac{5}{8}$ inch in staple, ginning 38 per cent. Promising results have been obtained with Madras Cambodia cotton in several parts of the Burma cotton tract.

Shan State Cottons.—Little is known of these as they are largely exported overland. Types up to 1 inch staple occur, the average being about $\frac{3}{4}$ inch. A botanical survey of these cottons is still in progress.

Buri.—(G. hirsutum-mill) an old acclimatised American cotton grown in north-east Hyderabad and to a small

extent in Chota Nagpur and the Central Provinces, of little commercial importance as it is rarely grown pure. Staple $\frac{7}{8}$" to 1", ginning percentage 31.

NOTE.—The staple lengths of the various growths of cotton described above represent the lengths as generally understood by the Trade. A detailed classification of Indian Cotton by staple lengths is embodied in a publication entitled "Report on the Staple lengths of the Indian Cotton Crop" be issued by the Indian Central Cotton Committee, Bombay.

I.—(4-*b*) CHARACTERISTICS OF COTTON VARIETIES GROWN ACCORDING TO LENGTH

(Based on the Provincial, State and All-India Cotton Forecasts and on information firms who compile their own

N.B.—The cottons marked " * " are pure strains

Descriptions of Cotton	Staple length (32nds inch.)	Colour	Feel	Blow-room loss per-centage
1	2	3	4	5
Long Staple.—Over 1 inch.	(The particulars given in these columns refer to observations and tests made in past seasons.)			
1. *Punjab—American—289 F.—(including 289F/K. 25&k. 23)	34	Bright, creamy white.	soft, silky.	9
Total Long Staple ..	..	..	..	..
Medium staple.—A-1 inch.				
2. *Sind Sudhar (289 F.I.) ..	32	Creamy white ..	Softish ..	8
3. *Punjab—American—289/43 ..	32	Wheat to Creamy white.	Soft ..	11
4. *Surti—Farm cotton (1027 A.L. F., Part).	32	Very bright, white.	Soft, silky ..	7–8
5. *Cambodia—Co. 2. (part) ..	32	Bright, slightly creamy.	Good, soft ..	5–7
Total 1 inch ..	..	..	..	..
Medium staple.—B-7/8″ to 31/32″.				
6. *Surti—Farm Cotton 1027 A+L. F., part)	30 to 31	Very bright white.	Soft, silky	7–8
7. *Cambodia—Co. 2 (part) ..	30	Bright, slightly creamy.	Good, soft ..	5–7
8. *Jayawant	30	Creamy white ..	Soft,-bodied ..	12
9. *Punjab—American—L.S.S. ..	30	White, brightish.	Good ..	6–10
10. *Westerns—Farm Cotton (Hagari-1)	28–30	Slightly creamy .	Soft-bodied ..	10–12
11. *Karunganni Strains ..	28–30	White to creamy white.	do ..	6– 8
12. *Sind-American-4F-98 &289F. Types (other than item 2).	28–30	White ..	Soft, silky ..	8
13. *Gaorani 6	28–30	White to creamy white.	Soft ..	6–10
14. Hyderabad Gaorani (other than item 13).	28	Creamy white ..	Good, soft ..	9–13
15. *B. D. 8	28	White ..	Good, smooth ..	5– 6
16. *Upland—Farm Cotton (Gadag-I)	28	Creamy white ..	Good-bodied ..	7– 8
17. *C. P. and Berar Verum ..	28	White ..	Soft, good-bodied	9
18. *Buri	28–31	Pearly white ..	Good ..	..
19. Surti ordinary	28	Creamy ..	Soft or slightly rough.	6– 7
20. Cambodia (Other than items 5 and 7).	28	Bright, slightly creamy.	Good-bodied ..	5– 7
21. Kumpta and Upland (other than items 8, 16, 28 and 38)	28	Yellow-tinted ..	Soft-bodied ..	14–16

IN INDIA. (THE INDIAN COTTON CROP OF 1939-40 SEASON CLASSIFIED OF STAPLE.)

specially supplied by the Provincial and State Departments of Agriculture, and by private estimates of the Cotton crop.)

evolved by Departments of Agriculture.

Spinning Capacity	Estimated production according to		Civil Districts in which Grown and Remarks
	Govt. (Official) forecasts	Private Agencies	
	In thousand bales of 400 Lbs. each		
6	7	8	9
	X	Y	X.—Includes extra-factory consumption. Y.—Excludes extra-factory consumption.
30's warp or 40's weft.	66	201 (*a*)	Lower Bari Doab Canal Colony.
..	66	201	
32's warp	107	226 (*b*)	Thar Parkar, Hyderabad and Nawabshah districts.
35's/40's warp	44	(*c*)	Lower Bari Doab Canal Colony (Multan and Montgomery districts).
28's/30's warp	23	(*d*)	Part of crop grown in Surat district, Navsari district and Rajpipla State.
do	68	(*e*)	Part of crop grown chiefly in Salem, Coimbatore Madura, Ramnad, Trichinopoly and South Arcot Districts.
..	242	226	
24's/28's warp	87	196	Rest of the 1027 A.L.F. crop grown in area shown against item (4); Ankleshwar taluka of Broach and Panch Mahals District. Nawapur taluka of West Khandesh District and Surat States.
do	50	(*e*)	Rest of the Co. 2 crop grown in area shown against item (5).
26's/30's warp	89	(*f*)	Dharwar, Bijapur, Satara and Belgaum Districts S.M.C. States.
26's warp	56	(*c*)	Lyallpur, Sheikhupura and Shahpur Districts.
24's ,,	34	(*g*)	Bellary, Anantapur, Cuddapah and Kurnool Districts.
24's ,,	45	(*h*)	Madura, Ramnad, Tinnevelly, Salem and Coimbatore Districts.
26's ,,	145	(*i*)	Right Bank of the Indus; Thar Parkar, Nawabshah and Hyderabad Districts.
30's ,,	40	(*j*)	Gaorani Protected area of Hyderabad State.
24's warp	103	(*j*)	do do do
30's warp	15	(*k*)	Broach District; Baroda District of Baroda State.
24's/30's warp	17	(*f*)	Gadag and Ron talukas of Dharwar District.
20's/24's ,,	37*	(*l*)	Nagpur, Wardha and Minar Districts and Berar.
30's warp	17	(*l*)	Nimar district of Central Provinces.
20's/24's warp	85	(*d*)	Taluka of West Khandesh District.
22's/26's warp	4	204	Salem, Coimbatore, Trichinopoly (including Pudukottai State), Madura, Ramnad, Tinnevelly and South Arcot Districts.
22's warp	93	193	Dharwar, Satara and Belgaum Districts, Satara Jagirs, S.M.C. States and Mysore State.

I.—(4-*b*). CHARACTERISTICS OF COTTON VARIETIES GROWN ACCORDING TO LENGTH

(Based on the Provincial, State and All-India Cotton Forecasts and on information and by firms who compile their own

N.B.—The cottons marked " * " are pure

Descriptions of Cotton	Staple length (32nds inch.)	Colour	Feel	Blow-room loss per-centage
1	2	3	4	5
22. White and Red Northerns ..	28	Creamy white	Good, soft ..	8
23. *Jarila	24 to 28	White ..	Soft ..	13
24. Tinnevellies (other than item 11)	24 to 28	Whitish-creamy	Full-bodied ..	6– 8
25. *Punjab—American-4F ..	24 to 28	White ..	Good-bodied ..	8–10
26. *Sind—American-4F ..	24 to 28	White ..	Soft, silky ..	8–10
Total $\frac{7}{8}$" to 31/32" ..	..	..	..	..
Total Medium staple ..	..	..	..	..
Short staple.—A-11/16" to 27/32".				
27. Salems	26 to 27	White to creamy white.	..	6– 8
28. Dharwar Upland-vilayati (other than item 6).	24	Creamy white ..	..	9–10
29. Central India	22 to 26	White ..	Good ..	10–12
30. Madras Westerns (other than item (10).	22 to 26	Creamy ..	Full-bodied ..	11–13
31. C.P. No. 1 Oomras	20 to 24	Creamy white ..	Soft ..	7– 8
32. Dholleras (Wagad, Lalio, etc.) ..	24 to 27	Bluish white ..	Silky ..	12–15
33. Hyderabad Kumpta and Upland.	20 to 26	Creamy white ..	Soft-bodied ..	14–16
34. Bijapur and Bagalkot Jowari ..	22	Creamy white	Good ..	11–13
35. Broach-Kanvi	20 to 24	Very white ..	Silky ..	7– 9
36. Banilla	20 to 24	White ..	Soft, good-bodied	11–14
37. Warangal and Cocanadas ..	20 to 26	White to dark brown.	Harsh ..	..
38. Bengals—N.W.F.P.	20 to 24	Creamy white ..	Silky ..	..
Total 11/16" to 27/32"	..	..	..	..

IN INDIA. (THE INDIAN COTTON CROP OF 1939-40 SEASON CLASSIFIED OF STAPLE)—(*contd.*).

specially supplied by the Provincial and State Departments of Agriculture, private estimates of the cotton crop).

strains evolved by Departments of Agriculture.

Spinning Capacity	Estimated Production according to		Civil Districts in which Grown and Remarks
	Govt. (Official) forecasts	Private Agencies	
	In thousand bales of 400 Lbs. each.		
6	7	8	9
22's warp	23	(*g*)	Kurnool District (excluding Pattikonda taluka) and Banganapalle State.
24's warp	24	(*m*)	East and west Khandesh Districts.
16's warp or 20's weft.	113	116	Chiefly in Madura, Ramnad, Tinnevelly and Coimbatore Districts.
20's warp	469	711	Canal Colonies, Western Punjab and Fazilka Subdivision of Ferozepore District comes under the class "medium staple" only if marketed pure.
20's warp	30	92	Thar Parkar, Nawabshah and Hyderabad Districts, Khairpur State.
..	1,576	1,512	
..	1,818	1,738	
14's/20's warp	4	(*h*)	Chiefly in Coimbatore, Salem and Trichinopoly Districts and Mysore State.
18's warp or 20's weft.	12	(*f*)	Dharwar District.
14's/20's warp	175*	350	Gwalior and Indore States and States included in Bhopal and Malwa Agencies of Central India; Jhalawar and Partabgarh States and Sironj, Chhabra and Pirawa Parganas of Tonk State.
16's warp	61	268 (*n*)	Bellary, Anantapur and Cuddapah Districts and Pattikonda taluka of Kurnool District.
13's/16's warp	82	83	Nagpur, Betel and Chanda Districts; Sausor taluk of Chhindwara District and Morsi taluk of Amravati District.
14's/18's warp	136	111	Ahmedabad District, Mehsana District of Baroda State and part of Western India States Agency.
14's/18's warp	22†	(*g*)	Raichur Protected Area.
14's/18's warp	39	(*g*)	Cotton other than Jayawant grown in Bijapur District.
14's/18's warp	242	377	Broach and Panch Mahals District (excluding Ankleshwar taluka), Kaira District, Baroda District, States in Rewakantha Agency (excluding Rajpipla State) and Cambay State.
12's/16's warp	32	(*m*)	East and West Khandesh Districts and Deccan Canals tract of Bombay Province.
14's warp	35	39	Nellore, Guntur, Kristna and East and West Godavari Districts and Golconda taluka of Vizagapatam District Warangal, Karimnagar, Nalgonda, Mahbubnagar, Atraf-i-Balda and Medak Districts of Hyderabad State.
12's/14's warp	3	(*o*)	Peshawar Valley.
..	843	1,228	

I.—(4-*b*). CHARACTERISTICS OF COTTON VARIETIES GROWN ACCORDING TO LENGTH

(Based on the Provincial, State and All-India Cotton Forecasts and on information firms who compile their own

N.B.—The cottons marked " * " are pure

Descriptions of Cotton	Staple length (32nds inch.)	Colour	Feel	Blow-room loss per-centage
1	2	3	4	5
Short staple.—B-9/16″ to 21/32″				
39. C. P. No. 2 Oomras	16 to 22	Good white ..	Moderately soft .	10
40. C. P. No. 3 Oomras	16 to 18	White ..	Harsh ..	10
41. Hyderabad Westerns ..	20	Creamy white ..	Full-bodied ..	11–13
42. Khandesh, Oomras (other than item 23).	18	White to Creamy white.	Slightly rough ..	9–11
43. Barsi and Nagar Oomras ..	18	Creamy white ..	Slightly rough ..	9–11
44. Hyderabad Oomras	18	Creamy white ..	Slightly rough ..	9–11
45. Dholleras (Mathia, etc.) ..	16 to 20	Creamy ..	Slightly rough ..	15
Total 9/16″ to 21/32″	..	..	..	..
Short staple.—C-17/32″ and below.				
46. Bengals—U. P.	12 to 20	Good white ..	Full-bodied ..	9–11
47. Bengals-Rajputana	12 to 20	Good white ..	Full-bodied ..	9–11
48. Bengals-Sind (desi)	12 to 18	Whitest ..	Roughest ..	8–10
49. Bengals-Punjab (desi) ..	16 to 18	Good white ..	Full-bodied ..	9–11
50. Comillas	12 to 16	White or khaki coloured.	Harsh ..	..
51. Chinnapathi	..	..	..	..
Total 17/32″ and below	..	..	..	..
Total Short Staple ..	..	..	..	..
Grand Total ..	..	..	..	..

(*a*) Includes Items Nos. (3) and (9); (*b*) Includes Items No. (12); (*c*) Included under Item No. (21); (*g*) Included under Item No. (30); (*h*) Included under Item No. (24); (*i*) Included (35); (*l*) Included under Items Nos. (31) and (39); (*m*) Included under Item No. (42); (*n*) Includes bales Malvi; † Includes 6,000 bales Jayavant. *Reeling is yarn spun for the Indian handloom (improved deshi). ‡‡ Adding the figures of 4,50,000 bales for the annual village or extra-factory Central Cotton Committee in selected areas, the total estimated production for the current season bales.

IN INIDA. (THE INDIAN COTTON CROP OF 1939-40 SEASON CLASSIFIED OF STAPLE.)—(*concluded.*)

specially supplied by the Provincial and State Departments of Agriculture, and by private estimates of the cotton crop).

strains evolved by Departments of Agriculture.

Spinning Capacity	Estimated production according to		Civil Districts in which Grown and Remarks
	Govt. (Official) forecasts	Private Agencies	
	In thousand bales of 400 Lbs. each		
6	7	8	9
10's/12's warp	524	525	Nimar, Wardha, Akola, Yeotmal and Amraoti (excluding Morsi taluk) districts and Mehkar taluk of Buldana districts.
6's/8's warp	74	87	Buldana (excluding Mehkar taluk), Hoshanagabad, Jubbulpore, Saugor, Bahndra, Raipur, Bilaspur, Chhindwara (excluding Sausor taluk) and Drug district.
12's/14's warp	42	(*g*)	Raichur district (excluding Raichur Protected Area) and Gulbarga district.
10's/12's reeling*	199	237	East and West Khandesh (excluding Nawapur taluka) and Nasik district.
10's/12's reeling	29	} 381	Ahmednagar, Poona and Sholapur districts; Akalkot State.
10's/12's reeling	280		Part of Hyderabad State not included under items (13), (14), (33), (37) and (41).
10's/12's reeling	92	66	Part of Western India States Agency and Amreli district of Baroda State.
..	1,240	1,296	
8's/10's reeling	161	147	United Provinces (including Rampur State), Delhi, Bihar, Orissa (excluding the portion included under item (51), Bundhelkhand Agency of Central India, Rewa State and Western Bengal.
8's/10's reeling	55	52	Ajmer-Merwara and Rajputana States other than those included under item (29).
8's/10's reeling	119 **	152	Sind (including Khairpur State); Particularly suitable for mixing with wool.
8's/10's reeling	641‡	636	The Punjab (including Punjab States except Khairpur).
8's/10's reeling	40	48	Assam and Eastern Bengal (Mymensing and Chittagong Hill Tracts districts and Tripura State)
..	1	..	Ganjam (excluding the Khondmals) and Koraput districts of Orissa; Vizagapatam (excluding Goloconda taluk) district of Madras Province.
	1,017	1,030	
..	3,100	3,554	
..	4,984††	5,493‡‡	†† Revised. The estimate of the 'Surti' crop in the Bombay Province has now been raised by 42,000 bales as compared with the forecast issued in April 1940.

No. (1); (*d*) Included under Item (6); (*e*) Included under Item (20); (*f*) Included under Item under Item No. (2); (*j*) Included under Items Nos. (43) and (44); (*k*) Included under Item No. items Nos. (10), (22), (33), (34) and (41); (*o*) Included under Item No. (49); Includes 90,000 industry. **Includes 82,000 bales 27 W.N. (improved deshi). ‡Includes 2,59,000 bales Mollisone onsumption of cotton in India, arrived at on the basis of enquiries conducted by the Indian omes to 59,43,000 bales according to private estimates against the official estimate of 49,84,000

I—(5-A). GENERAL INFORMATION ABOUT THE TYPES OF COTTON FOUND IN HYDERABAD STATE.

STATEMENT—A.

No.	Common Name	Scientific Name	Remarks
1	2	3	4
1	Havari or Tat or Oomra ..	Gossypium Neglectum Roseum.	
2	Verum ..	G.N. Verum ..	
3	Malvensis ..	G.N. Malvense	
4	Banilla ..	..	Is a cross between Bani and Comilla.
5	Gaorani (Kharif). ..	G. Indicum. ..	
6	Rabi Bani ..	do	
7	Mollisoni ..	G.I. Mollisoni	Is a cross between Bani and Cutchicum.
8	Mungari ..	G. Neglectum Cutchicum.	Kharif cotton of Raichur.
9	Hingari or Jawari or Western. ..	G. Herbaceum	Rabi cotton of Raichur.
10	Kumpta ..	G. Herbaceum	
11	Jayawant ..	G. Herbaceum	Or improved Kumpta.
12	Dharwar American	G. Hissutum and G. Mexicanum.	Mixture of Upland American (G. Hirsutum) and new Orlean (G. Mexicanum) The former predominating.
13	Gadag No. I	G. Hirsutum	Or improved upland American.
14	Dharwar No. 1	..	
15	American or Numbri or Buri.	G. Hirsutum Mill.	
16	Cambodia ..	G. Hirsutum	A type of Upland American.
17	Cocanada ..	G. Obtusifolium.	
18	Comilla or Assam Cotton.	G. Cernuum	
19	Egyptian Cotton.	..	With large black clean seeds without Fuz.
20	Dev kapas or tree cotton.	..	With seeds all joined together.
21	Garden cotton	G. Arborium	With red flowers and green seeds.
22	Jarila ..	..	Colour white and feel soft.

N.B.—G. Gossypium. N=Neglectum. I=Indicum.

I—(5-B). GENERAL INFORMATION ABOUT THE TYPES OF COTTON FOUND IN H.E.H. THE NIZAM'S DOMINIONS.

STATEMENT—B.

According to five years average from 1345 *to* 1349 *Fasli.*

Srl. No.	Commercial Name	Districts	Approximate area in acres	Details
1	2	3	4	5
1	Hyderabad Oomras	(1) Aurangabad Dist. (All Taluks). (2) Bir Dist. (All Taluks) except Mominabad. (3) Parbhani Dist. (All taluks) (4) Osmanabad Dist. (Taluks of Parenda ½ of Kallam and ½ of Tuljapur). (5) Nizamabad Dist. (All Taluks) (6) Adilabad Dist. (All Taluks except Nirmal).	18	Oomra is a commercial name given to the cottons grown in the districts mentioned in Col. 3. It is a mixture of Havri white flower and Bani Yellow flower and Namri American white flower is more predominent in Aurangabad and Bir. Its ginning percentage is 33 to 35. Staple ½" to ¾" suitable for spinning 8-12's warp counts.
2	Hyderabad Gaorani	(1) Bir Dist. (Taluk Mominabad). (2) Nander Dist. (All Taluks) .. (3) Osmanabad Dist. (All Taluks except Parenda, ½ of Kallam and ½ of Tuljapur) (4) Bidar Dist. (All Taluks) .. (5) Adilabad Dist.(Nirmal Taluk)	9	It is the produce of Gaorani protected Area, *i.e.*, Nander, Bidar and parts of Adilabad, Bir and Osmanabad. The area under this is 9 lakhs of acres and the annual production is 1.1 lakh of bales. This is a long staple cotton yellow flowers, broad leaves. It is mixed with Namri (American) to an extent of 10 to 30 per cent. It fetches about Rs. 50 to 80 over Broach.
3	Raichur Kumpta & Upland	(1) Kopal Dist. (All Taluks) .. (2) Raichur Dist. (Taluk of Gangawati, Kushtagi, Sindhnur and Lingsugur).	2 ..	This is a Rabi cotton. Superior to Oomra but inferior to Hyderabad Gaorani. Broad table yellow flowers.
4	Western ..	(1) Gulbarga Dist. (All Taluks).. (2) Raichur Dist. (All Taluks except Gangawati, Kushtagi, Sindhnur and Lingsugur).	3	It is creamy white. Full-bodied, 12's/14's warp. Staple length ⅞".
5	Warangal & Cocanadas	(1) Atraf-i-Balda (All Taluks) .. (2) Medak Dist. (All Taluks) .. (3) Nalgonda Dist. (All Taluks) (4) Mahbubnagar Dist. (All Taluks). (5) Warangal Dist. (All Taluks) (6) Karimnagar Dist. (All Taluks). (7) Baghat Dist. (All Taluks)	1	It is G. Obtusifolium (Rabi) of southern part of Warangal and district Nalgonda. It is brown in colour with staple of ⅝ to ⅞ inches suitable for 16 to 20's warp counts. Ginning percentage is 23 to 26. Chief markets are Warangal, Khammam and Madhira.

I—(5—C).—GENERAL INFORMATION ABOUT THE

STATEMENT

Serial No.	Kinds of cotton	Staple	Date of sowing	Period of growth & height
1	2	3	4	5
1	Oomra ..	$\frac{3}{4}$"	2nd week of June to 7th of July.	140 days 3' to 5'
2	Hyderabad Gaorani	$\frac{7}{8}$"	do	160 days $2\frac{1}{2}$' to 4'
3	Western ..	$\frac{5}{8}$" to $\frac{7}{8}$"	August 2nd week to end of Sept.	160 days $2\frac{1}{2}$' to 4'
4	Cocanada ..	$\frac{7}{8}$"	do	150 days 3' to 5'
5	Mungari Raichur	$\frac{3}{4}$"	2nd week of June to 1st of July	140 days 3' to 4'
6	Kumpta Raichur	$\frac{7}{8}$"	August 2nd week to end of Sept.	160 days $2\frac{1}{2}$' to 4'
7	Namri or American	$\frac{7}{8}$" to 1"	Both Rabi and Kharif.	150 days $2\frac{1}{2}$' to 5'
8	Jarila ..	6/8" to $\frac{7}{8}$"	..	..

(*Source*—Agricultural

TYPES OF COTTON FOUND IN HYDERABAD STATE.

—C.

Shape of leaves	Shape of bolls	Colour of flower	No. of pickings	Yield of Kapas per acre
6	7	8	9	10
				Lbs.
Narrow lobe ..	Round	White ..	3	300
Broad lobe ..	Elongated ..	Yellow	3	250
do	Round ..	do	2 to 3	200
do	Elongated ..	do	2 to 3	250
do ..	do ..	White ..	2 to 5	300
do ..	do ..	Yellow ..	2 to 3	250
do ..	do ..	White ..	2 to 3	250
..	..	White ..	..	..

Department, Hyderabad).

I—(6). TRADE CLASSIFICATION OF INDIA COTTON.

Serial No.	Trade descriptions	Tracts to be included
1	2	3
I	BENGALS	
	(1) U.P. Deshi ..	United Provinces (including Rampur State). Delhi, Bihar and Orissa. Bundelkhand and Rundelkhand Agencies of Central India, and Western Bengal (Bankura and Midnapore districts).
	(2) Punjab Deshi	Punjab (including) India States except Khairpur State) and North-West Frontier Provinces.
	(3) Sind Deshi ..	Sind (including Khairpur State).
	(4) Rajputana Deshi.	Ajmer-Merwara and Rajputana States (excluding Palanpur State).
II.	AMERICANS.	
	(1) Sind-American	Sind.
	(2) Punjab-American.	Punjab.
III.	OOMRAS. ..	
	(1) Berar Oomras	Berar.
	(2) C.P. Oomras	Central Provinces (excluding Nimar district).
	(3) Nimar Oomras.	Nimar district of Central Provinces.
	(4) Berar Verum	Berar.
	(5) C.P. Verum	Central Provinces (excluding Nimar district).
	(6) Nimar Verum	Nimar district of Central Provinces.
	(7) Khandesh-Oomras.	Nasik, East Khandesh, and West Khandesh (excluding Nagpur taluk) districts.
	(8) Khandesh-Banilla.	East and West Khandesh districts.
	(9) Barsi-Nagar Oomras.	Ahmednagar, Poona and Sholapur districts, Phaltan State; Atpadi Mahal of Aundh State; and Manpeta of Satara district.
	(10) Hyderabad Oomars.	Aurangabad, Bir (excluding Mominabad taluk). Parbhani, Adilabad (excluding Nirmal taluk). Osmanabad (excluding portion included under "Hyderabad Gaorani") and Nizamabad districts Akalkot State.

I—(6). TRADE CLASSIFICATION OF INDIA COTTON.—(*Contd.*)

Serial No.	Trade descriptions	Tracts to be included
1	2	3
IV.	HYDERABAD GAORANI	The Hyderabad Gaorani Protected area of Hyderabad State Comprising Nander, Bidar and part of Osmanabad districts; Nirmal and Mominabad taluks.
V.	CENTRAL INDIA.	
	(1) Malvi (2) Central India Others.	Gwalior, Indore and States in Bhopal, Malwa and Southern States Agencies.
VI.	BROACH ..	Kaira, Broach (excluding Olpad and Ankleshwar taluks) and Panch Mahal districts; States in Rewa Kantha Agency (excluding Rajpipla). Cambay State and Baroda district.
VII.	SURTI	Olpad and Ankleshwar taluks; Surat district; Nawapur taluk Rajpipla State; Surat States and Nazsari district.
VIII.	DHOLLERAS	
	(1) Gujarat-Dholleras. ..	"Wagad", "Lalio" and other staple cottons grown in Ahmedabad district, Palanpur State, Mehsana district, States in Mahi-Kantha and Banas Kantha Agencies.
	(2) Gujarat-Short Staple.	Short-staple cotton grown in the above tract.
	(3) Kathiawar-Dholleras.	"Wagad", "Kala" and other staple cottons grown in the Kathiawar States including Amreli district.
	(4) Kathiawar-Short Staple.	"Mathia" and other short-staple cotton grown in the Kathiawar States
	(5) Cutch ..	Cutch State.

I—(6). TRADE CLASSIFICATION OF INDIA COTTON.—(*concld.*)

Serial No.	Trade descriptions	Tracts to be included
1	2	3
IX.	SOUTHERNS.	
	(1) Kumpta and Upland.	Dharwar, Belgaum, and Satara (excluding Manpeta) districts; Satar Jagirs (excluding Phaltan State and Atpadi taluk of Aundh State) S.M.C. States; Mysore State.
	(2) Kumpta and Upland (Raichur).	Raichur Protected Area.
	(3) Bijapur and Bagalkot Jowari	Bijapur district.
	(4) Westerns ..	Bellary, Anantapur and Cuddapah districts, Raichur district (excluding the Raichur Protected Area) and Gulbarga district.
	(5) White and Red Northerns	Kurnool district (including Banganapalle State).
	(6) Warangal and Cocanadas.	Nellore, Guntur, Kristna and Godavari districts; Warangal, Karimnagar, Nalgonda, Mahbubnagar, Atraf-i Balda and Medak districts.
	(7) Chinnapathi (Short-staple).	Ganjam and Vizagapatam districts.
X.	TINNEVELLYS (INCLUDING KARUNGANNIES)	North Arcot, South Arcot, Coimbatore, Salem, Trichinopoly (including Pudukottai), Madura, Ramnad and Tinnevelly Districts, Mysore State.
XI.	CAMBODIAS	
XII.	SALEMS	
XIII.	COMILLAS	Assam (whole) and Eastern Bengal (Mymensingh, Chittagong Hill tracts and Tripura State).
XIV.	BURMAS	
	(1) Wagale ..	Burma.
	(2) Wagyi	

PRESIDENCY
Kannar
AURAN
Vaijapur
Puithun
Bir
Ashti
B.T.

I—(7). TRADE CLASSIFICATION OF COTTON IN HYDERABAD STATE (REVISED).

Serial No.	Trade descriptions	Tracts proposed to be included
1	2	3
I	OOMRAS.	
	(1) Hyderabad Oomras.	Aurangabad, Bir (excluding Mominabad taluk), Parbhani, Adilabad (excluding Nirmal taluk), Osmanabad (excluding portion included under Hyderabad-Gaorani) and Nizamabad districts.
	(2) Hyderabad Gaorani.	The Hyderabad-Gaorani Protected area of Hyderabad State comprising Nanded, Bidar and part of Osmanabad Districts, Nirmal and Mominabad taluks.
II	SOUTHERNS.	
	(1) Kumpta and Upland (Raichur).	Raichur Protected Area.
	(2) Westerns	Raichur district (excluding the Raichur Protected Area) and Gulbarga district.
	(3) Warangal and Cocanadas.	Warangal, Karimnagar, Nalgonda, Mahbubnagar, Atraf-i-Balda and Medak districts.

I—(8). HYDERABAD COTTON CLASSIFIED ACCORDING TO LENGTH OF STAPLE.

Serial No.	Trade name	Description of cotton			Spinning capacity
		Staple length 32nds inch	Colour	Feel	
1	2	3	4	5	6
	Medium Staple $\frac{7}{8}$″ *to* 1″				
1	Jayawant ..	32	Creamy-white	Soft-bodied	26's/30's warp.
2	C.P. & Berar Verum	28	White ..	Soft-bodied good.	20's/24's warp.
3	Upland-Farm Cotton (Gadag-I).	28 to 32	Creamy-white	Good-bodied	30's warp.
4	Hyderabad Gaorani	28	Creamy-white	Good-soft	24's warp.
5	Cambodia ..	28 to 30	Bright, slightly creamy	Good-bodied.	22's/26's warp.
6	Kumpta-Dharwar ..	28	Yellow-tinted	Soft-bodied	24's/30's warp.
7	Westerns & Northerns	24 to 28	Creamy	Full-bodied	16's warp or 20's weft.
8	Jarila	24 to 28	White	Soft	24's warp.
	Short Staple A. $\frac{5}{8}$″ to 13/16″ *inch.*				
1	Hyderabad-Kumpta-Dharwar.	20 to 26	Creamy-white	Soft-bodied	14's/16's warp.
2	Hyderabad-Westerns	20	do	Full-bodied	12's/14's warp.
3	Banilla	20 to 24	White ..	Soft, good-bodied.	12's/15's warp.
4	Cocanadas and Warangal.	24	Dark brown	Harsh	14's warp or 20's weft.
	Short Staple B. Below $\frac{5}{8}$ *inch.*				
1	Barsi and Nagar Oomra	18	Creamy-white	Slightly rough.	16's/20's weft.
2	Hyderabad Oomras	18	do	do	do

(*Source.*—Indian Central Cotton Committee's Statistical leaflet No. 1, May 1935).

I—(9). DISTRICTWAR TYPES OF COTTON

Serial No.	Name of District	Type of cotton		Proportion in each District	Kharif	Rabi	Average outturn in lint
		Commercial	Botanical				
1	2	3	4	5	6	7	8
1	Aurangabad	Oomra American Jarila	G. Neglectum G. Hirsutum	99 1	Kharif do	.. ..	100 ..
2	Bir	Oomra	G. Neglectum	100	do	..	80
3	Parbhani	do	G. Neglectum	100	do	..	80
4	Nander	Hyderabad Gaorani. 2 Mixture	G. Indicum G. Neglectum G. Indicum G. Hirsutum	85 15	do do	.. ..	75 80
5	Bidar	Hyderabad Gaorani	G. Indicum G. Hirsutum	100	do	..	75
6	Osmanabad	1. Hyderabad Gaorani 2. American 3. Oomra	G. Indicum Hirsutum G. Hirsutum G. Neglectum G. Hirsutum G. Indicum	20 2 78	do do do	.. .. ..	80 80 80
7	Nizamabad	Oomra	1. do 2. G. Indicum	80 20	do ..	.. Rabi	70 70
8	Gulbarga	Western	1. G. Herbacium 2. G. Hirsutum	95 5	.. ..	do do	80 80
9	Raichur	1. Kumpta 2. Western 3. American 4. Mungari	1. G. Herbacium 2. do 3. G. Hirsutum 4. G. Neglectum Mixture.	15 60 5 20	.. .. Kharif do	do do do ..	70 70 70 80
10	Adilabad	1. Oomra 2. Gaorani	4. G. Neglectum G. Indicum Mixture.	90 10	do do	.. ..	80 75
11	Warangal	..	..	..	..	..	..
12	Mahbubnagar	1. Cocanadas	G. Obtusifolium	10	Kharif	..	80
13	Nalgonda	..	..	..	..	..	..
14	Karimnagar	..	..	..	..	..	..
15	Medak	2. Oomras	Mixture of G. Neglectum.	90	Kharif	..	80
16	Atraf-i-Balda	..	..	..	..	..	..

GROWN IN HYDERABAD STATE.

Ginning percentage	Spinning value in counts	The present mixture in the Local	Remarks
9	10	11	12
34 to 36 31 to 33	12 to 14's 24 to 24's	G. Neglectum and American +Bani Pure American ..	Bani (Hyderabad Gaorani long stapled mixture about 20 per cent.).
34 to 36	12 to 14's	G. Neglectum+American+ Bani.	do
32 to 33	14 to 16's	do	Mixture of Bani about 30 per cent.
26 to 28	24 to 28's	G. Indicum .. G. Hirsutum	G. Hirsutum (American 25 to 30 per cent.).
28 to 30	18 to 20's	G. Neglectum 50 per cent. G. Hirsutum 15 per cent. .. G. Indicum 35 per cent.	Only Hadgaon taluk.
27 to 29	24 to 28's	G. Indicum G. Hirsutum	
27 to 29	24 to 28's	do	Only in Latur taluk.
31 to 32	28 to 30's	American pure	American pure.
32 to 34	14 to 16's	Mixture	Latur Taluk mixture.
32 to 34	14 to 16's	do	do
26 to 28	14 to 16's	80 per cent. Indicum ..	Grown as Rabi.
26 to 27	16 to 18's	..	do
30 to 32	20 to 22's	American pure ..	do
26 to 28	24's	Pure Kumpta ..	Grown in protected area, Kopbal, Gangawathi.
26 to 27	16 to 18's	..	Grown in Raichur and other taluks.
31 to 32	20 to 22's	Pure American ..	Grown in protected area.
31 to 32	14 to 16's	Mixture	Grown in Raichur taluk and red soils of other taluks.
32 to 33	14 to 16's	do	Grown in all the taluks except Nirmal.
27 to 29	24 to 28's	do	Nirmal taluk.
..	..	..	
27 to 29	20's	Mixture of Herbacium and Indicum.	Sparingly grown.
..	..	..	
..	..	..	
30 to 33	14 to 16's	do	Mixture of varieties.
..	..	..	

I.—(10) Progress in the Introduction and Spread of Improved varieties of Cotton in Hyderabad State.

Hyderabad State holds a prominent place in Indian cotton and the value of this supply of medium-stapled cotton undoubtedly one of the very best in India to Indian Mills cannot be too strongly emphasised.

To re-establish the reputation of the Hyderabad Gaorani (moglai) cotton, H.E.H. the Nizam's Government. for the last 25 years making wide efforts in the important successful operation of replacing mixed cottons by the valuable Bani (Hyderabad Gaorani) type. This cotton is indigenous to the Marathwara tract of the Dominions of H.E.H. the Nizam.

The Hyderabad Cotton Cultivation and Transport Act of 1929 is a great step forward in this direction, as under this Act, not only the importation of inferior cotton into the protected area is prohibited, but also the cultivation in that area of any variety other than the approved one is penalized.

Further, under the Factories Act, the ginning and pressing factories were required to take out licenses and submit returns to the Director of Commerce and Industries.

Strengthened by such legislation the Agricultural Department is striving hard to eradicate the inferior rosy-white flowered Neglectum Roseum cotton from the protected zone comprising the districts of Nander, Bidar and parts of Bir and Osmanabad and Nirmal taluk of Adilabad district and to establish in its place the superior yellow-flowered Bani cotton for which the tract was once very famous.

This is being accomplished in two ways. In the first place, large quantities of the famous Umri cotton seed are purchased by the Department outright and distributed on taccavi loan system to the cotton growers in the protected zone from seed depots located in suitable centres. The second method consists in roguing out all white-flowered plants from an area of 1,500 acres in the village of Bhainsa in the Nander district where it has been found that the quantity of Gaorani is very good and almost pure and the superior seed thus obtained is being distributed for sowing in other villages.

The other steps taken by Government are the enactment of the Hyderabad Agricultural Markets Act and its application to some of the leading cotton markets in the State.

To supplement their own efforts, the Hyderabad Government obtained in 1928 financial support from the Indian Central Cotton Committee for botanics work on "Gaorani" cotton for 5 years at B. 26,000 p.a. This period was extended to 1934 with this subsidy the botanical work was started in 1929. In 1931 a botanical survey was made of the cotton crop. The survey scheme was for 5 years.

These are two protected areas, one for Gaorani and the other for Kumptas and Dharwar American.

Besides the Gaorani tract the other tract dealt with are :

(*a*) *Aurangabad District.*—Distribution of Banilla cotton seed was made with a view to replace the mixture now grown in the District.

Raichur District.—Distribution of seed of improved varieties was made with a view to replace the local inferior type of Kumpta and the mixture of Dharwar American. Seeds were purchased from the Cotton Sales Societies of Hubli and Gadag and distributed on Taccavi loan system.

PROGRESS IN THE DISTRIBUTION OF IMPROVED

SHOWING

Sl. No.	Year	Gaorani Local	Gaorani 6	Banilla	Verum 262	Parbhani-American No. I.
1	2	3	4	5	6	7
1	1925-26..	4,284,960 267,810	..	..	..	..
2	1926-27..	3,402,726 212,670	..	..	..	..
3	1927-28..	2,575,200 160,954	..	..	..	..
4	1928-29..	4,655,259 290,954	..	..	..	..
5	1929-30..	4,238,400 264,900	..	..	..	..
6	1930-31..	3,600,000 200,000	..	60,000 4,125	..	..
7	1931-32..	1,680,000 100,000	..	72,000 4,500	..	..
8	1932-33..	3,013,440 167,413	..	28,500 1,800	..	..
9	1933-34..	2,734,360 171,522	..	49,350 3,085	17,784 1,100	..
10	1934-35..	1,169,338 73,090	669 40	143,040 9,000	18,296 1,550	..
11	1935-36..	416,000 42,953	7,910 526	76,800 5,120	40,000 2,500	..

VARIETIES OF COTTON SEEDS

pounds of seeds / acreage sown.

Jayawant	Upland Gadag No. 1	Dharwar No. 1	Cambodia (Co.2)	Hagari
8	9	10	11	12
..	..	..	..	..
..	..	..	..	..
..	..	..	..	..
..	..	..	..	..
..	..	..	..	..
	48,696	204,372		
..	4,058	16,942	..	..
207,500	49,170			
6,418	4,882	..	..	..
303,042	37,814		600	
16,240	2,641	..	45	..
296,907	32,110			
15,320	1,680	..	..	..
407,781	80,000			
4,747	1,623	..	..	..
503,014	49,984			882
37,816	3,360	..	..	80

PROGRESS IN THE DISTRIBUTION OF IMPROVED

SHOWING

Sl. No.	Year	Gaorani Local	Gaorani 6	Banilla	Verum 262	Parbhani-American No. I.
1	2	3	4	5	6	7
12	1936-37..	..	69,541 5,795	28,000 2,000	63,240 3,952	..
13	1937-38..	..	723,989 50,993	14,000 1,000	..	..
14	1938-39..	..	2,636,568 217,345	..	..	500 25
15	1939-40..	..	4,349,760 241,653	..	..	18,480 1,848
16	1940-41..	..	5,165,184 300,000	..	..	244,080 24,408

VARIETIES OF COTTON SEEDS.
pounds of seeds.
——————(*concluded*)
acreage sown.

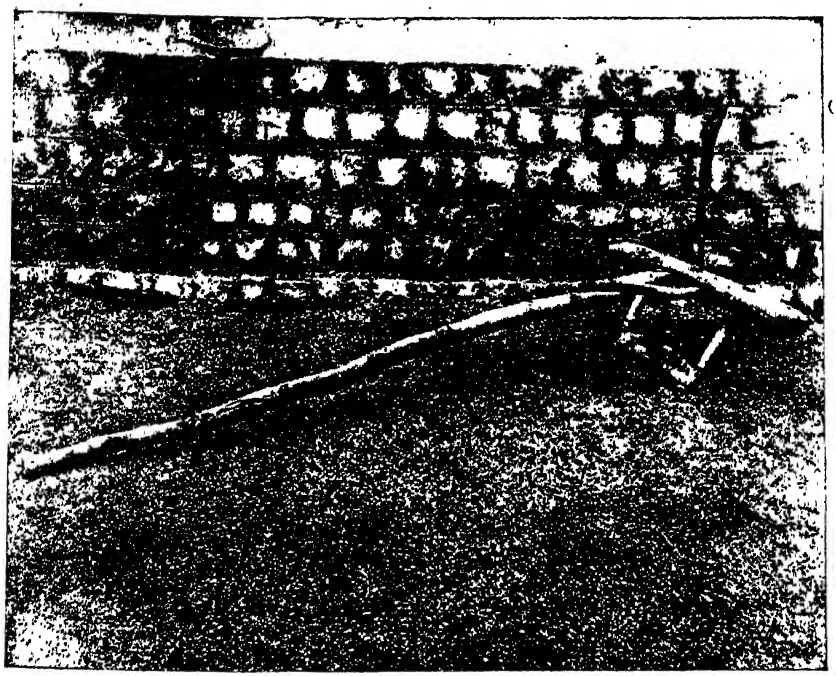
Jayawant	UplandGadag No. 1	Dharwar No. 1	Cambodia (Co. 2)	Hagari
8	9	10	11	12
326,528	48,105	..	..	..
12,037	1,834			
253,404	10,941	..	..	..
20,032	1,060			
254,917	2,520	..	..	..
21,706	301			
448,821	268	..	..	..
35,318	20			
..	..	..	..	..

I.—(11). Irrigation Cotton in Hyderabad State.

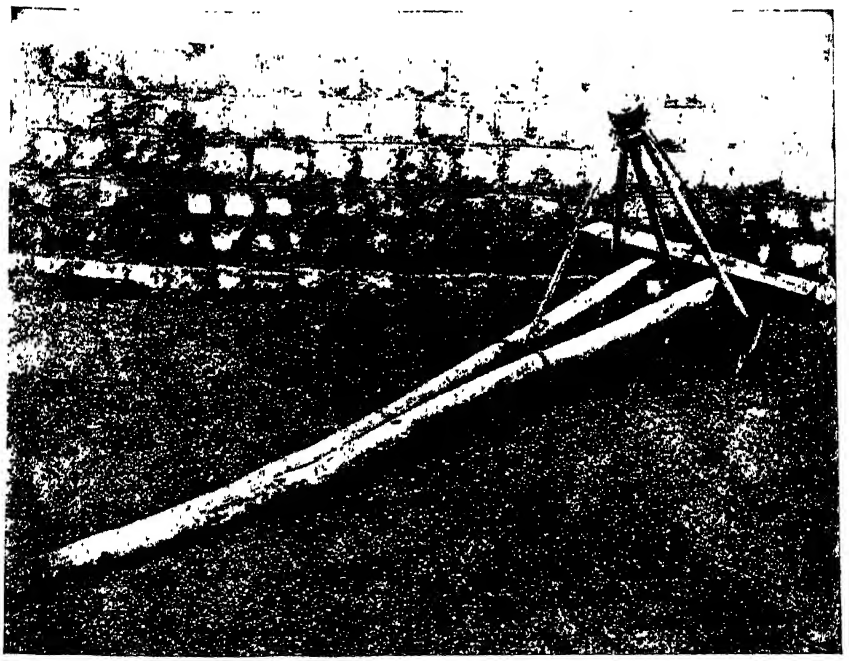
	Acres.
1927-1928 ..	3,981
1928-1929 ..	10,016
1929-1930 ..	27,650
1930-1931 ..	5,701
1931-1932 ..	2,656
1932-1933 ..	5,727
1933-1934 ..	Nil.
1934-1935 ..	16
1935-1936 ..	Nil.
1936-1937 ..	do
1937-1938 ..	do
1938-1939 ..	do
1939-1940 ..	do

CHAPTER II.

Cotton Season, Climate and Cultivation.



THE KOLPA OR BULLOCK HOE.

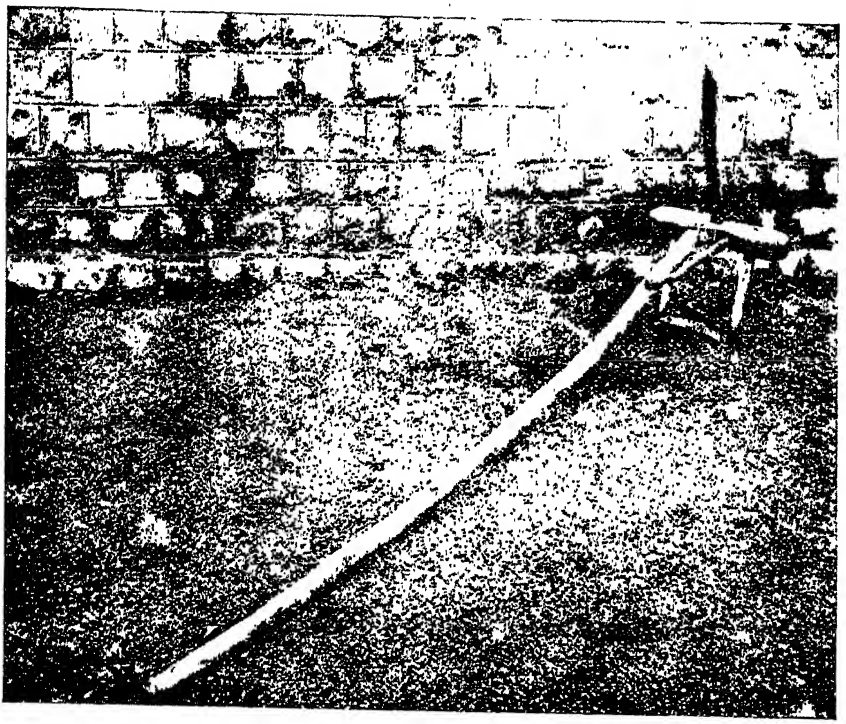


THE TIPHAN OR THREE-COLOURED SEED-DRILL.

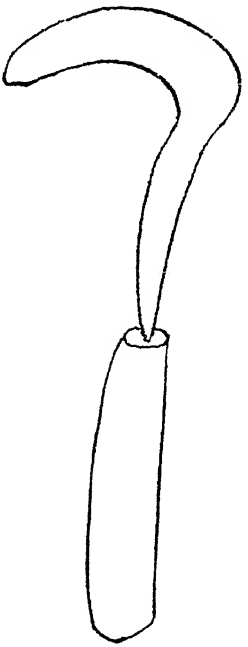
PLATE 9.

RUBBING SEED WITH FRESH COWDUNG AND ASHES.

SOWING COTTON WITH THE MOGHA.



THE BAKHAR OR BLADE-HARROW.



THE KHURPI OR HAND-HOE (ONE-THIRD OF ACTUAL SIZE).